


REMARKS

Claims 1-6 and 11-17 are active in the present application. Claims 1 and 4-6 have been amended to remove multiple dependencies and for clarity. Claims 7-10 have been cancelled. Claims 11-17 are new claims. Support for the new claims is found in the original claims. No new matter is added. An action on the merits and allowance of claims is solicited.

Respectfully submitted,

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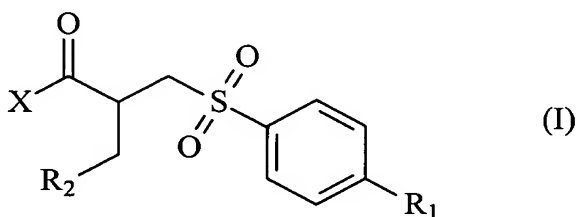
Amendment Filed on:

1-14-2002IN THE CLAIMS

Claims 7-10 (Cancelled).

Please amend the claims as follows:

--1. (Amended) A compound which is a 3-arylsulfonyl-2-methyl propanoic acid derivative of formula (I):



wherein

X is HO-NH- or HO-;

R₁ is selected from the group consisting of phenyl, 4-chlorophenyl, 4-fluorophenyl, 4-cyanophenyl, benzamido [(i.e. -NH-CO-Ph)] and benzamido substituted on the terminal phenyl ring by C₁-C₄ alkyl, fluoro, chloro, cyano or C₁-C₄ alkoxy;

R₂ is selected from the group consisting of:

(a) -S-Ar or -S-CH₂-Ar, wherein Ar is a monocarbocyclic or bicarbocyclic aromatic moiety which [is] may be either unsubstituted or substituted with one or two substituents

selected from the group consisting of C₁-C₄ alkyl, phenyl, benzyl, C₁-C₄ alkoxy, fluoro, chloro, bromo, nitro, cyano, hydroxy, amino, dimethylamino, acetamido, methylthio and acetyl;

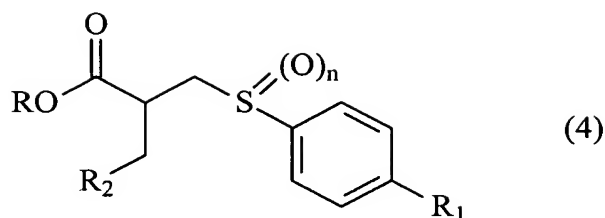
(b) -O-Ar, wherein Ar is as defined above;

(c) -S-Het or -S-CH₂-Het, wherein Het is a heterocyclic ring selected from the group consisting of pyridine, pyrimidine, pyridazine, pyrazine, 1,2,5-triazine, imidazole, thiophene, furan, pyrrole, pyrazole, 1,3-thiazole, 1,3-oxazole, 1,2,3-triazole, 1,2,4-triazole, 1,3,4-thiadiazole, 1,3,4-oxadiazole, 1,2,3,4-tetrazole, quinoline, isoquinoline, indole, 1,3-benzoxazole, 1,3-benzothiazole, benzimidazole, [1,3]oxazolo[4,5-b]pyridine, [1,3]thiazolo[4,5-b]pyridine, [1,2,3,4]tetrazolo[1,5-b]pyridazine and purine, and wherein said Het group [can] may be substituted with one to three substituents selected from the group consisting of C₁-C₄ alkyl, phenyl, pyridyl, benzyl, C₁-C₄ alkoxy, methylthio, fluoro, chloro, nitro, cyano, hydroxy, oxo, amino, methylamino, dimethylamino, 2-dimethylaminoethyl, acetamido and acetyl; [and] or

(d) 2,5-dioxo-1-imidazolidinyl or 2,4-dioxo-1-imidazolidinyl, [either of which is] which may be optionally substituted at the carbon atom by one or two methyl, linear or branched C₂-C₄ alkyl, phenyl, benzyl or hydroxymethyl groups, and at the nitrogen atom with C₁-C₄ linear or branched alkyl;

or a pharmaceutically acceptable salt thereof.

4. (Amended) A process for producing a compound as defined in claim 1, starting from a compound of formula 4:



wherein R is H or the residue of a carboxylic acid ester, [R₁ and R₂ are as defined in claim 1] R₁ is selected from the group consisting of phenyl, 4-chlorophenyl, 4-fluorophenyl, 4-cyanophenyl, benzamido and benzamido substituted on the terminal phenyl ring by C₁-C₄ alkyl, fluoro, chloro, cyano or C₁-C₄ alkoxy;

R₂ is selected from the group consisting of:

(a) -S-Ar or -S-CH₂-Ar, wherein Ar is a monocarbocyclic or bicarbocyclic aromatic moiety which may be either unsubstituted or substituted with one or two substituents selected from the group consisting of C₁-C₄ alkyl, phenyl, benzyl, C₁-C₄ alkoxy, fluoro, chloro, bromo, nitro, cyano, hydroxy, amino, dimethylamino, acetamido, methylthio and acetyl;

(b) -O-Ar, wherein Ar is as defined above;

(c) -S-Het or -S-CH₂-Het, wherein Het is a heterocyclic ring selected from the group consisting of pyridine, pyrimidine, pyridazine, pyrazine, 1,2,5-triazine, imidazole, thiophene, furan, pyrrole, pyrazole, 1,3-thiazole, 1,3-oxazole, 1,2,3-triazole, 1,2,4-triazole, 1,3,4-thiadiazole, 1,3,4-oxadiazole, 1,2,3,4-tetrazole, quinoline, isoquinoline, indole, 1,3-benzoxazole, 1,3-benzothiazole, benzimidazole, [1,3]oxazolo[4,5-b]pyridine, [1,3]thiazolo[4,5-b]pyridine, [1,2,3,4]tetrazolo[1,5-b]pyridazine and purine, and wherein said Het group may be substituted with one to three substituents selected from the group

consisting of C₁-C₄ alkyl, phenyl, pyridyl, benzyl, C₁-C₄ alkoxy, methylthio, fluoro, chloro, nitro, cyano, hydroxy, oxo, amino, methylamino, dimethylamino, 2-dimethylaminoethyl, acetamido and acetyl; and

(d) 2,5-dioxo-1-imidazolidinyl or 2,4-dioxo-1-imidazolidinyl, either of which is optionally substituted at the carbon atom by one or two methyl, linear or branched C₂-C₄ alkyl, phenyl, benzyl or hydroxymethyl groups, and at the nitrogen atom with C₁-C₄ linear or branched alkyl; and

n is 0 or 2,

[which process comprises] said process comprising:

(([a] A) hydrolysing [a] said compound of formula 4 in which R is [the] a residue of a carboxylic [and] acid ester to give a compound of formula (I) in which X is HO-; or

(([b] B) hydrolysing and oxidising, in either order, [a] said compound of formula 4 in which n is 0 and R is the residue of a carboxylic acid ester, to give a compound of formula (I) in which X is HO-; or

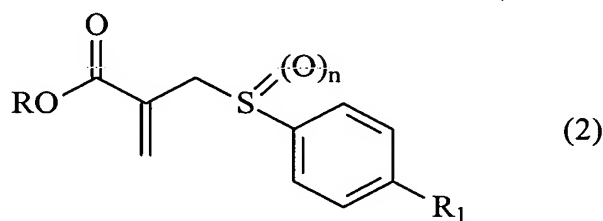
(([c] C) activating [a] said compound of formula 4 wherein R is H and n is 2 to form an activated carboxy group, coupling the activated carboxy group with hydroxylamine or an O-protected derivative thereof and, if necessary, deprotecting the hydroxamic group to give a compound of formula (I) wherein X is -NHOH; or

(([d] D) submitting [a] said compound of formula 4 wherein R is H and n is zero to a sequence of reactions comprising oxidation at the sulphur atom, activation of the carboxy group, condensation of the activated carboxy group with hydroxylamine or an O-protected derivative thereof and, if necessary, deprotection of the hydroxamic group to form a compound of formula (I) wherein X is -NHOH, the oxidation step being conducted either before the activation step or after the condensation step; and/or

([e] E) if desired, converting a resulting compound of formula (I) into another compound of formula (I); and/or converting a free compound into a pharmaceutically acceptable salt thereof; and/or converting a salt into a free compound.

5. (Amended) A process according to claim 4 wherein the compound of formula 4 is obtained by

([a] A) subjecting a compound of formula 2:



[wherein R, R₁ and n are as defined in claim 4,] wherein R is H or the residue of a carboxylic acid ester, R₁ is selected from the group consisting of phenyl, 4-chlorophenyl, 4-fluorophenyl, 4-cyanophenyl, benzamido and benzamido substituted on the terminal phenyl ring by C₁-C₄ alkyl, fluoro, chloro, cyano or C₁-C₄ alkoxy;

R₂ is selected from the group consisting of:

(a) -S-Ar or -S-CH₂-Ar, wherein Ar is a monocarbocyclic or bicarbocyclic aromatic moiety which may be either unsubstituted or substituted with one or two substituents selected from the group consisting of C₁-C₄ alkyl, phenyl, benzyl, C₁-C₄ alkoxy, fluoro, chloro, bromo, nitro, cyano, hydroxy, amino, dimethylamino, acetamido, methylthio and acetyl;

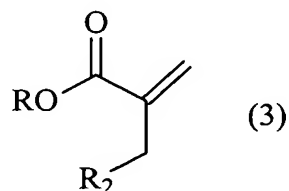
(b) -O-Ar, wherein Ar is as defined above;

(c) -S-Het or -S-CH₂-Het, wherein Het is a heterocyclic ring selected from the group consisting of pyridine, pyrimidine, pyridazine, pyrazine, 1,2,5-triazine,

imidazole, thiophene, furan, pyrrole, pyrazole, 1,3-thiazole, 1,3-oxazole, 1,2,3-triazole, 1,2,4-triazole, 1,3,4-thiadiazole, 1,3,4-oxadiazole, 1,2,3,4-tetrazole, quinoline, isoquinoline, indole, 1,3-benzoxazole, 1,3-benzothiazole, benzimidazole, [1,3]oxazolo[4,5-b]pyridine, [1,3]thiazolo[4,5-b]pyridine, [1,2,3,4]tetrazolo[1,5-b]pyridazine and purine, and wherein said Het group may be substituted with one to three substituents selected from the group consisting of C₁-C₄ alkyl, phenyl, pyridyl, benzyl, C₁-C₄ alkoxy, methylthio, fluoro, chloro, nitro, cyano, hydroxy, oxo, amino, methylamino, dimethylamino, 2-dimethylaminoethyl, acetamido and acetyl; and

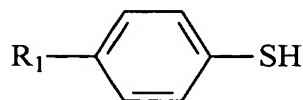
(d) 2,5-dioxo-1-imidazolidinyl or 2,4-dioxo-1-imidazolidinyl, either of which is optionally substituted at the carbon atom by one or two methyl, linear or branched C₂-C₄ alkyl, phenyl, benzyl or hydroxymethyl groups, and at the nitrogen atom with C₁-C₄ linear or branched alkyl; and

([b] B) treating a compound of formula 3:



wherein R and R₂ are as defined as above,

with a thiol of formula:



to obtain a compound of formula 4 in which n is zero.

6. (Amended) A pharmaceutical composition which comprises a pharmaceutically acceptable carrier or diluent and, as an active principle, [a] the compound as defined in [any one of claims 1 to 4] claim 1.--

Claims 11-17 (New).